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INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

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COUNTRY Hungary

REPORT

SUBJECT

Underwater Military Bridges

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SOURCE EVALUATIONS ARE DEFINITIVE. APPRAISAL OF CONTENT IS TENTATIVE.

[redacted] report [redacted] (with an English translation) concerning the construction and tactical use of underwater bridges by the Hungarian Army. The report includes a description of an underwater bridge and an account of the method of erection and it includes a sketch, with explanatory legend, showing the component parts of such a bridge (assembled). The information [redacted] obtained [redacted] from an official Hungarian Army manual, the Műszaki Utasítás (Engineering Guide).

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Data pertaining to underwater bridges.

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1./ Reference:

Muszaki Utasítás [the Engineering Guide] deals with the standard underwater bridge in the people's army on page 30 or thereabouts.

This guide is classified Secret (Titkos). It is always in the Secret Office, and it can be taken out only by officers, on their receipt, when they are preparing for some technical drill. These secret regulations can be used only for officer training because the data in them cannot be used to instruct EM.

The exact name of the regulations book is:

MUSZAKI ALAPISMERETEK

TECHNICAL FUNDAMENTALS

a Nephadsereg nem muszaki beosztasu
tisztjei szamara.

for officers of the People's Army
not in technical assignments.

2./ General data on underwater bridges:

Underwater bridges are built about 30 centimeters under the surface of the water. Thus the bridge is built in such a way as to make enemy discovery difficult and for the same reason it can usually be used permanently.

Otherwise it is set up at the place and time needed for a crossing.

After the troops are across, the engineers -- with suitable help which is provided by the rifle units -- take apart the bridge and carry it forward to the next crossing place.

The bridge is never left standing for a period too long for the material from which it is made.

3./ Technical data:

a) The material for the bridge is wood.

b) Method of erection: underwater divers ^{secure} ~~fasten~~ the beams and the piles, which are already pounded down by pile drivers, as shown in the accompanying sketch. The flooring (supporting planks) are fastened to the beams; ^{tie-down} ~~fastening~~

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planks are put over these on the two edges and fastened to the piles in order to keep the water from lifting the flooring.

- c) Width: 5 meters.
- d) It can be used only in water with depths up to 3 meters.
- e) Length (height) of piles: 7-8 meters. These are pounded into the water ^[bed] so that their tops are 40-50 centimeters under the surface of the water.
- f) Longitudinal distance ^{between} of piles ~~from one another~~: 2 meters.
- g) The bridge consists of three rows of piles.
- h) Each member consists of: 6 piles, 31 cross beams, 20 supporting planks, 2 tie-down planks, and a quantity of bolts.
- i) Longest length of bridge: one kilometer. Longer underwater bridges are not constructed.
- j) During crossings, and even when there is no crossing, the ^{side} ~~two~~ edges of the bridge are marked with flags.
- k) Load capacity: every vehicle can cross on it; T-34 tanks can follow one another at distances of 15-20 meters when crossing. There is no restriction on lighter vehicles.

The bridge is ⁵ ~~univerally~~ useable until the water rises to more than one meter above the flooring of the bridge. When the water is higher, the T-34's, for example, cannot use it because this type of tank cannot cross water deeper than one meter without ^{causing an} exceptional ^{(strain} ~~load~~ on the ^{engine} ~~motor~~, or ^{engine} ~~motor~~ failure.

4./ Practical demonstration:

Such an underwater bridge was built at the time of the large maneuvers in the fall of 1953 ^{near} ~~across~~ the Tisza.

The bridge was built ~~at~~ ^{near} dam keeper's house number 37.

The Minister of Defense (M. Farkas) was personally present at the construction.

The bank of the Tisza was cut down at a slant and the vehicles approached the bridge from the side, then just in front of the bridge they turned onto it.

This bridge was about 200 meters long.

Besides this, such a bridge is built every year at the so-called Methods

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Demonstration, but only on dry land. At these times, one member is prepared to demonstrate each phase of construction.

The Methods Demonstrations are held at the Kecskemet Maneuver Area (Kecskemeti Gyakorloter), which lies along the highway leading towards Dunafoldvar.

5./ Notes on use:

1) If necessary, several bridges are built one beside the other, but traffic does not use every bridge in every case; this ^{prevents} ~~avoids~~ easy discovery, and if one bridge is discovered and blown up, ^(stand-by) bridges ~~are~~ remain^s to continue the crossing.

2) ~~It is to be noted especially that~~ the right side of the bridge, in the direction of march, is the stronger; the heavy vehicles cross on this side, and infantry crosses on the left side.

Key to sketch:

1. Merevito kotes -- ^{tie beams} ~~stiffening~~ bond.
2. Aszokdeszkek -- ^{cross planking} ~~supporting~~ planks.
3. Colopok -- piles.
4. Keresztkotesek -- cross ^{braces} ~~beams~~.
5. Leszorito deszkek- tie-down planks.

[dot] -- bolts
[cross hatching] -- ^{section} ~~part~~ [of pile] ^{driven} ~~rammed~~ into the earth.

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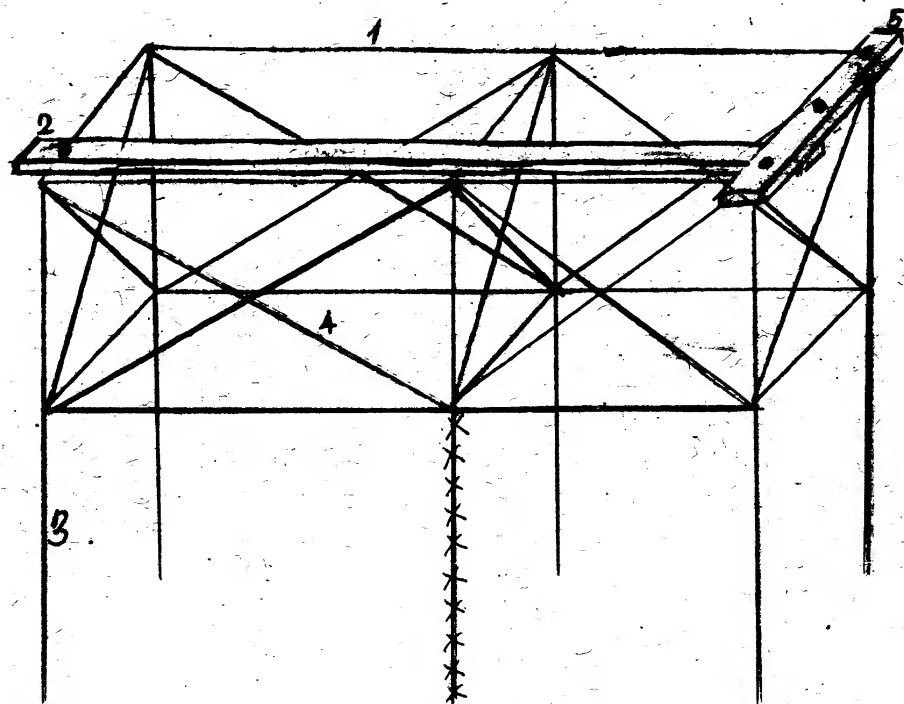
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- = csavarok

✕ = A cölöpök földbevert része



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